REMARKS

I. INTRODUCTION

In response to the Final Office Action dated July 16, 2003, claims 1, 2, 3, 11 and 12 have been amended. Claims 1-16 remain in the application. Entry of these amendments, and re-consideration of the application, as amended, is requested.

II. CLAIM AMENDMENTS

Applicant's attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of clarifying the language of the claims, and were not required for patentability or to distinguish the claims over the prior art.

III. EXAMINER INTERVIEWS

On September 22, 2003 and October 7, 2003 interviews were held between Examiner Zahn and Applicant's attorney, Bradley K. Lortz to discuss proposed claim language. At the conclusion of the second interview it was agreed that the claims as amended above overcome the §112 rejections.

IV. NON ART REJECTION

On page (2) of the Office Action, claims 1-16 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

In response, Applicant has made amendments to the claims 1, 2, 3, 11 and 12 as indicated above to overcome the rejections. No new matter is involved.

V. PRIOR ART REJECTIONS

On page (2) of the Office Action, claims 1, 4-6, and 11 were rejected under 35 U.S.C. §102(b) as being anticipated by Coldren, U.S. Patent No. 4,896,325 (Coldren). On page (3) of the Office Action, claims 2 and 3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Coldren as applied to claim 1.

Applicant respectfully traverses these rejections as discussed below.

Independent claim 1 is generally directed to an open loop controller for a sampled grating distributed Bragg reflector (SGDBR) laser, comprising a look up table of current settings stored in the controller and a processor. Each entry in the table corresponds to an optical power and output wavelength of the SGDBR laser and each entry in the look up table comprises a first mirror current setting for a first mirror section of the SGDBR laser, a second mirror current setting for a second mirror section of the SGDBR laser, a phase current setting for a phase section of the SGDBR laser and a gain current setting for a gain section of the SGDBR laser. The first mirror current setting, second mirror current setting, phase current setting, and gain current setting controlling at least one of a group comprises an optical output power and an output wavelength of the SGDBR laser. The processor is given a selected optical power and output wavelength and selects an entry from the look up table and applies the first mirror current setting, the second mirror current setting, the phase current setting and the gain current setting to current sources coupled respectively to the first mirror section, second mirror section, the phase section and the gain section of the SGDBR laser to control the laser at substantially the selected optical power and output wavelength. The SGDBR laser comprises a cavity including the phase section and the gain section and bounded by the first mirror section and the second mirror section.

The cited reference does not teach or suggest these various elements of Applicant's independent claims.

Coldren describes an improvement for allowing selective tuning of the emitted beam over a broad bandwidth to a diode laser having an active section for creating a light beam by spontaneous emission over a bandwidth around some center frequency and for guiding and reflecting the light beam between a pair of mirrors bounding the active on respective ends thereof to create an emitted beam of laser light. The mirrors each have narrow, spaced reflective maxima with the spacing of the reflective maxima of respective ones of the mirrors being different whereby only one the reflective maxima of each of the mirrors can be in correspondence and thereby provide a low loss window at any time. The preferred mirrors each include a plurality of discontinuities to cause the narrow, spaced reflective maxima wherein the spacing of the discontinuities of one mirror is different from the spacing of the discontinuities of the other mirror so as to cause the wavelength spacing of the maxima to be different. Additionally, the preferred embodiment includes a vernier circuit operably connected to the mirrors for providing an electrical signal to the mirrors which will cause

continuous tuning within a desired frequency band, an offset control circuit operably connected to the mirrors for providing a voltage signal to the mirrors which will shift the reflective maxima of the mirrors into alignment at a desired frequency mode, and a phase control circuit for adjusting the laser mode wavelength to be in correspondence with the low loss window. However, Coldren does not teach or suggest a look up table of current settings stored in a controller and applied to an SGDBR laser by a processor, each entry in the table corresponding to a separate operating point of the SGDBR laser. Instead, Coldren teaches away from Applicant's invention because it describes a tuning process of $V_{control}$ of the vernier control circuit is adjusted between 0 and some V_{max} to tune the laser. Specifically, at column 8, lines 22-34, Coldren teaches:

> "By adjusting $V_{control}$ between 0 and some V_{max}, the vernier control circuitry 48 can tune the laser 38 within the crosshatched area indicated in the figure for no offset. Upon reaching V_{max}, a first offset is applied by the offset control circuitry 50 and V_{input} is once again restarted at 0. This causes the tuning to jump to the next maxima point and by again adjusting $V_{control}$ between 0 and V_{max}, the vernier control circuitry 48 can tune the laser 38 within the cross-hatched area indicated in the figure for a first offset. The same procedure is followed for a second offset, et seq., through the tunable band of the laser 38."

This tuning process of Coldren where control voltage is adjusted across a range teaches away from a look up table of current settings as presently claimed.

Thus, Applicant submits that independent claim 1 is allowable over Coldren. Further, dependent claims 2-16 are submitted to be allowable over Coldren in the same manner, because they are dependent on independent claim 1, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-16 recite additional novel elements not shown by Coldren.

VI. CONCLUSION

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicant's undersigned attorney.

Respectfully submitted,

GATES & COOPER LLP
Attorneys for Applicant

Howard Hughes Center
6701 Center Drive West, Suite 1050
Los Angeles, California 90045
(310) 641-8797

Date: October 9, 2003

By: _____
Name: Bradley K. Lentz
Reg. No.: 45,472

BKL
G&C 122.4-US-U1